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AUTOMATIC ABSTRACTION OF SOFTWARE SOURCE CODE

ABSTRACT

A method for verifying software source code that includes references to program variables includes
5   processing the source code to derive a set of next-state functions representing control flow of the source code. The references to the program variables in the source code are replaced with non-deterministic choices in the next-state functions. The next-state functions including
10   the non-deterministic choices are restricted to produce a finite-state model of the control flow. The finite-state model is then verified to find an error in the source code.